

Appl. No. 10/605,656
Amdt. dated March 14, 2005
Reply to Office action of January 21, 2005

Amendments to the Drawings:

A replacement sheet for Figure 5 is submitted to add the reference number 57 for indicating the location of the fluid tank. The fluid tank was described in paragraph 0023 of the specification, but no reference number was assigned to it. Paragraph 0023 of the specification
5 has also been amended accordingly. No new matter is added through these changes.
Acceptance of the corrected drawing is respectfully requested.

Attachment: One Replacement Sheet

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REMARKS/ARGUMENTS

1. Objection to claim 8:

Claim 8 is objected to because it appears that "conduction channel" should be replaced with "metal plate". (see paragraph [0026], lines 7-8) Appropriate correction is required.

Response:

The applicant intended to claim the metal composition of the conduction channel in claim 8, but did not explicitly state in the specification what the material of the conduction channel is. However, paragraph 0026 of the specification describes how the metal plate 88 and the conduction channel 86 are created in the same process step. First, the passivation opening 84 is etched. Then, metal material is added, thereby forming both the conduction channel 86 in the passivation opening 84 and the metal plate 88.

Since paragraph 0026 discloses that the material of the metal plate 88 is gold or nickel, paragraph 0026 has been amended to clarify that the conduction channel 86 is also made out of gold or nickel. Acceptance of claim 8 and the amended paragraph 0026 is respectfully requested.

2. Rejection of claims 1-9 under 35 U.S.C. 102(e):

Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Huang et al. (US 6,814,428).

Response:

The applicant would like to point out the patentable differences between claim 1 and the Huang et al (hereinafter referred to as Huang) reference. Claim 1 contains the limitation "a conduction channel for connecting the metal plate to ground". As shown in Figure 5, the metal plate 88 is connected to ground through the conduction channel 86.

On the other hand, Huang teaches a metal layer 13 that is used for connecting various structures in a printhead. The metal layer 13 is connected to ground 20 at one end, is connected to heaters 14a and 14b, and is connected to a MOSFET 15. The Examiner

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states that the source 66 and the drain 68 of the MOSFET 15 teach a conduction channel for connecting the metal plate 13 to ground 20. However, the applicant respectfully disagrees.

Although the metal layer 13 is connected to ground 20 at one end and is connected to the MOSFET 15 at another end, Huang does not teach a “conduction channel for connecting the metal plate to ground”, as is recited in claim 1. In col.2, lines 51-53, Huang teaches that the drain 68 and the source 66 of the MOSFET 15 are electrically connected to the heaters 14a and 14b and a ground 20 via the metal layer 13. That is, the metal layer 13 connects the source and drain of the MOSFET 15 to ground 20. This is the opposite structure of what is recited in claim 1, in which it is the conduction channel that connects the metal plate to ground. For this reason, the applicant submits that claim 1 is patentable over the Huang reference. Claims 2-9 are dependent on claim 1, and should be allowed if claim 1 is allowed. Reconsideration of claims 1-9 is respectfully requested.

3. Introduction to new claims 10-21:

New claim 10 is similar to claim 8, and states that the metal plate is also made out of gold or nickel. Support for this claim is given in the original paragraph 0026 of the specification, and is more clearly supported in the amended paragraph 0026.

New claim 11 is supported in Figure 5 and in paragraph 0026 of the specification. Huang does not teach that the conduction channel extends through a passivation opening for connecting the metal plate to ground, and claim 11 is patentably distinct from Huang.

New claim 12 is supported in Figure 5 and in paragraph 0023 of the specification. Claim 12 is patentable over Huang since Huang does not teach a metal layer disposed between a chamber and a metal plate.

New claim 13 is supported in Figure 5 and in paragraphs 0026 and 0032 of the specification. No new matter is added through any of the new claims 9-13.

New independent claims 14 and 18 are based on original claim 1, but stress a method for reducing parasitic capacitance in a microinjector structure and a method for providing shielding protection for a microinjector structure, respectively. Support for these claims is

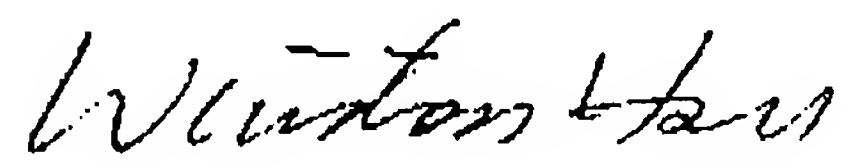
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found in the original claim 1 and in paragraph 0032 of the specification. Dependent claims 15-17 and 19-21 are substantial duplicates of dependent claims 11-13. No new matter is added through new claims 14-21. Acceptance of new claims 9-21 is respectfully requested.

5 The applicant submits that each of the claims in the instant application are patentable over the Huang patent, and respectfully requests that a timely Notice of Allowance be issued in this case.

Sincerely yours,

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Note: Please leave a message in my voice mail if you need to talk to me. The time in D.C. is 13 hours behind the Taiwan time, i.e. 9 AM in D.C. = 10 PM in Taiwan).

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